

STAT

REPORT ON THE ACTIVITIES OF THE ACADEMY OF SCIENCES, LATVIAN SSR

Source:

Nauka i Zhitza, No 12, 1951, pages 8-10

STAT

STAT

FOR THE WELFARE OF THE NATION

[Report on the Activities of the Academy of Sciences,
Latvian SSR]

Ya V. Pejve, President of the

Academy of Sciences

Latvian SSR

The Soviet system guarantees an unheard-of blossoming of sciences in all the republics of our multi-national state. Science is developing successfully, moving ever onward and freein: itself from all that is outdated, aged and scholastic. Scientific achievements provide guidance for practical work. Free, creative deliberation, and the solution of scientific problems in collaboration with industrial and agricultural workers preserve science from stagnation.

By means of the inspired and great ideas of the Party of Lenin-Stalin scientific endeavor in all Soviet republics is making valuable contributions to advanced learning and is helping the Soviet people in solvin: the vital problems of its national economy.

The growth of progressive science in Latvia became possible only after the traitors, led by the Communist Party, overthrew the Fascist dictator Ul'menis in 1940 and entered the harmonious family of the peo les of the Soviet Union. The Soviet system assures all the necessary conditions for the blossoming forth of Latvian culture -- national in form, socialist in content.

(Photograph caption: Academician A. M. Kirkhenshteyn of the Academy of Sciences, Latvian SSR, gives a report at a session of the Academy concerning the introduction into the rural economy of the Republic of the achievements of Michurin agro-biological science.)

The assistance of all Soviet republics and, particularly, of the great Russian people guarantees the speedy development of the industrial and agricultural economy, as well as the science and culture of the Latvian SSR.

The Latvian Academy of Sciences is one of the youngest Academies in the USSR. It was constituted in 1946. In the course of the succeeding years there was developed a creative collaboration between the many Institutes of the Academy and the workers of the industrial and agricultural economy. During 1950 and 1951 they successfully carried on work assigned to render scientific assistance to the great construction projects of Byelorussia. Specialists in the various branches of science took part in solving problems connected with the construction of massive hydro-electric stations and irrigation canals on the Svisloch, Don, Dnepr, and Amur-Bar'ya, in the study and exploitation of the natural riches of the vast areas of land along the Volga, in the Ukraine and in Central Asia.

In giving support to the great construction projects the Latvian Academy of Sciences is conducting work in twelve fields of scientific research. Geologists are studying the problem of the creation of water-tight, water-repellant earth and soils. They have invented new methods of producing asphalt concrete through the use of water-repellant materials. The technology of water-repellancy is extremely simple and capable of wide use. The researchers of the Institute for Development have submitted plans for excavation equipment for the purpose of cutting through sandstone sandbanks and soft ground with multi-scooped dredges. Scientific workers of the Institute for Problems of Forest Economy are investigating methods for the solidification and afforestation of sandy areas. It is to these subjects that a special series of activities is devoted.

The chemists are carrying on investigations into the corrosion

of iron in solutions of chlorine salt. This is important for improving the stability of iron structures in close contact with salt-bearing ground or soils. Latvian electrical engineers are working on methods of adapting super-stable cast iron to the construction of electrical machines, as well as on some problems connected with the electric welding of metals.

Apart from these problems, the scientists of the Latvian Academy from these problems, the scientists of the Latvian Academy are allotting a great deal of attention to the solution of questions of power engineering in the Baltic area. In this work they are assisted by the energetics Institute imeni Krzhizhanovskiy of the Academy of Sciences, USSR. As a first priority, energetics is concerned with the problems of the western Dvina waterfall. The River Daugava (western Dvina) is the most important source of cheap electric power not only for the Latvian SSR but also for the Belorussian and Lithuanian SSR.

Lately the scientists of Latvia have established close cooperation with the workers of industrial enterprises in Riga. This points up the activity of the Energetics and Electrical Engineering Institute of the Academy of Sciences Latvian SSR. In some concerns the scientific workers of the Institute have carried out measures designed to economize in fuel and electric power, to master new methods of tempering cast iron, and others. They have developed scientific bases for the reconstruction of the power system, they have studied questions connected with employing the small rivers of the republic to produce electric power and the problems of the electrification of socialist agriculture in the Latvian SSR. During the current year the Institute concluded an agreement with the Machine-molding Plant to introduce into production super durable iron.

The technique of obtaining such iron was developed by the workers of the Energetics and Electrical Engineering Institute. Agreements for socialist collaboration were also concluded with the VEF Plant and with the Sarkana Zvaygane Plant. These agreements are being fulfilled successfully.

During the first half of 1951 the members of the Institute delivered 93 lectures on energetics and electrical engineering at industrial enterprises in Riga.

Many similar examples may be cited of the effective aid that has been rendered by the institutes of the republic to the national economy. The Physics Institute for the first time designed a special instrument for computing the cutting regime for lathe work on metals. The Riga Railroad-car Building Plant has been given help on the problem of servicing magnetic defect tracers, while the Sarkana Zvaygane Plant were given assistance in heat treatment of steel. The Chemical Institute developed new methods for the hydraulic mixing of clay for the construction materials industry, as well as new binding substances derived from the waste products of gypsum mines, and new kinds of non-lead glazing materials for the porcelain pottery industry, etc.

The technique for producing several new medical preparations has been developed by Latvian scientists. For introducing a new method of manufacturing the PASK drug the director of the Institute for Problems of Forest Economy, Active Member of the Academy of Sciences Latvian SSR A. I. Kalnin'sh and the Senior scientific associate of the Institute S. A. Hiller, together with G. M. Semenyuk, N. N. Naumenko and K. M. Gershov, engineers at the Riga Pharmaceutical plant, were awarded Stalin prizes in 1951.

In the Institute of Experimental Medicine valuable work is being done in studying Latvian health resorts, and techniques have been worked out for the manufacture of new albumin-vitamin preparations. For his part in work leading to the industrial synthesis of ascorbic acid (Vitamin C) Active Member of the Academy of Sciences Latvian SSR, A.A. Schmidt, was awarded a Stalin Prize in 1951. In the towns of Aluksne and Liepaya the Institute conducted orientation sessions on problems of the development of Pavlovian science, on dietetics and on the latest achievements of medicine.

Much valuable work for the benefit of the forest industry and other branches of industry in the Latvian SSR was completed recently by the Institutes for Problems of the Forest Industry, Economics, and other institutions.

Vital tasks stand before the members of the Agricultural Institutes of the Academy. At the present time, the Latvian SSR is completing the collectivization of the entire agricultural economy. Almost 98 percent of the peasantry are united in kolkhozes. The large-scale kolkhozes, fully armed with mechanical know-how, are leading the economy, thanks to the achievements of advanced Soviet agricultural science.

The scientists of the Academy of Sciences Latvian SSR are working on the most important problems of agricultural production. The Institute of Soil Science and Farming is studying the problems of raising productivity throughout the agricultural establishment. It is giving farreaching aid in introducing pasture farming to kolkhozes, it is compiling soil maps, it is supervising the Michurin laboratories of the kolkhozes. New methods have been worked out

by the Institute to determine the humus acidity of soil, it has conducted a series of projects to study micro-elements -- cobalt, copper, boron and others. It has compiled a cartogram of the contents of active cobalt in the soils of the republic. Processes have been developed in Latvia to obtain high yields of perennial grass, as have techniques for growing winter wheat, sugar beet and other crops.

During 1950 and 1951 the members of the Institute organized several orientation sessions in kolkhozes of the Latvian SSR. The scientists established fruitful cooperation with the Kolkhoz imeni V. I. Lenin, Jausciy Rayon; the Zemgale Kolkhoz, Algavsciy Rayon; the Pervoye Mayu Kolkhoz, Dzakrieniy rayon, and others. At the Kolkhoz imeni V. I. Lenin they conducted a scientific production orientation conference. The kolkhozes were given constant assistance in drafting production plans, in developing crop rotation and various agricultural techniques depending on soil and climatic conditions.

(Caption, page 9. Scientific orientation session of the Academy of Sciences Latvian SSR at the Novell'ska Machine Tractor Station. The collective farmers listened with great interest to the reports of the scientists.)

In order to obtain higher yields in grain and technical crops, the Institute set up 63 experimental sections in kolkhozes throughout the republic. During 1951 the scientific associates of the Institute for Soil Science and Farming gave numerous lectures on questions of Michurin agro-biological science for collective farmers and agricultural specialists.

The Institute for Development did considerable work in studying marshes and swamplands. It elaborated procedures for the industrial and agricultural use of peat, for the development of the swamp areas of the republic, and methods of food crop rotation; it studied the problem of establishing permanent food bases for animal husbandry and gave assistance to kolkhozes in introducing pasture crop rotation.

(Caption, page 10. President of the Academy of Sciences Latvian SSR, Ya. V. Peys (right) and the Director of the Institute for Soil Science and Farming, S. A. Murav'ev examining experimental specimens of rye wheat.)

The Institute of Zoo-Technology and Zoo-Hygiene has obtained interesting results in its development of methods for breeding and feeding domestic animals. The scientists established, that in some parts of the republic the addition of micro-elements -- cobalt and copper -- to animal fodder sharply increases the productivity of livestock, particularly in the sandy and marshy regions of the Latvian SSR. The Institute has developed a series of measures for increasing the efficiency of milk cattle breeding, horse breeding, sheepbreeding and pigbreeding. During the summer of 1951, the Institute put into practice measures to develop advanced methods of cow-milking and rationalized raising of calves in kolkhozes. It is carrying out work connected with colt raising, especially by introducing the advanced zoo-technological methods of S. I. Shteyman. In kolkhozes some ten reports were read on questions of breeding agricultural livestock and on the organization of feed bases for animal husbandry.

In the first half of the current year the Academy of Sciences Latvian SSR conducted a series of scientific meetings and conferences. In the town of Liepaya scientific orientation sessions were convened by the Academy in order to assist the industry of this town. In conjunction with the All-Union Academy of Agricultural Sciences under V. I. Lenin, it conducted scientific meetings on questions concerning the increase of technical crops. At this session the scientific associates of the Academy of Sciences of Belorussia, Lithuania, and Estonia also took part.

A scientific conference was held in conjunction with the anniversary of the publication of Comrade Stalin's brilliant works on questions of linguistics. These works serve as guiding stars for the scientists and associates of the Academy of Sciences Latvian SSR as indeed they do for all Soviet scientists in the further development of their labors and in drawing scientific inquiry closer to the practical questions of our national economy.